

## REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the outstanding Office Action, the Examiner rejected claims 11, 13, 14, and 30, under 35 U.S.C. §112, ¶2, as allegedly being indefinite; and rejected claims 11, 13, 14, and 30, under 35 U.S.C. §102(b), as allegedly being anticipated by Levesque '407 (U.S. Pat. No. 6,076,407). The Examiner also objected to the Specification as allegedly having new matter introduced in the previous Response of August 7, 2008.

As a preliminary matter, Applicants and their Representative kindly thank the Examiner for the courtesies extended during the Examiner Interview of February 3, 2009.

By this Amendment, claim 11 has been amended for form and clarity, claims 13, 14, 30, and 32 have been cancelled, and new claims 33-34 have been added. Applicants submit that no new matter has been introduced. As such, claims 11 and 33-34 are currently presented for examination, of which claim 11 is the sole independent claim.

Insofar as the objection to the Specification and the §112, ¶2 and §102 rejections are still deemed to be relevant, Applicants traverse these objections and rejections as follows:

I. Objection to the Specification.

In the pending Office Action, the Examiner alleged that the prior amendment to the Specification introduced new matter. (See, Office Action: page 2).

Applicants point out that the prior amendment merely introduced a comma to clarify the following sentence: "In this manner, body 1 is inserted into the interior of jet pump 10 substantially, without varying the posture or the angle of operation apparatus 100 as a whole."

As discussed during the Interview, the indicated portions of the Specification as well as the Drawings provide ample evidence that the apparatus body is substantially inserted into the jet pump.

It is believed that the Examiner understands this point, as the Examiner suggested that the claim terms reflecting this attribute be clarified to read “essentially fully inserted,” which the Applicants have done. Applicants, therefore, respectfully request the withdrawal of the objection to the Specification.

## II. Rejections Under §112, ¶2.

In the pending Office Action, the Examiner alleged that the claims were indefinite because the preamble of independent claim 11 recites several elements, which he believes converts the claim into a subcombination claim, but these elements are not positively recited and the body of the claim is directed to the apparatus. (See, Office Action: pages 4-5). In addition, the Examiner also alleged that the claims are replete with functional language which do not constitute patentable limitations. (See, Office Action: page 6). Applicants respectfully disagree.

As discussed during the Interview, with respect to functional language, Applicants remind the Examiner that prevailing case law (as well as the MPEP) do not regard functional language as unpatentable *per se*. Indeed, the Federal Circuit has indicated that, in some instances, functional language reciting the relative arrangement and sizing of structural elements, may be the best way to recite parts of an apparatus. Case in point, in the Orthokinetics v. Safety Travel Chairs, 806 F.2d 1565 (Fed. Cir.) case, the District Court had held the following claim indefinite:

Claim 1. In a wheel chair having a seat portion, a front leg portion, and a rear wheel assembly, the improvement wherein ***said front leg portion is so dimensioned as to be insertable through the space between the doorframe of an automobile and one of the seats thereof*** whereby said front leg is placed in support relation to the automobile and will support the seat portion from the automobile in the course of subsequent movement of the wheel chair into the

automobile, and the retractor means for assisting the attendant in retracting said rear wheel assembly upwardly independently of any change in the position of the front leg portion with respect to the seat portion while the front leg portion is supported on the automobile and to a position which clears the space beneath the rear end of the chair and permits the chair seat portion and retracted rear wheel assembly to be swung over and set upon said automobile seat. (*Emphasis added*).

The Federal Circuit overturned the District Court by holding that the functional language "wherein said front leg portion is so dimensioned as to be insertable through the space between the doorframe of an automobile and one of the seats thereof" was clearly definite. The Federal Circuit opined that the claims were intended to cover the use of the invention with various types of automobiles and that a particular chair on which the claims read may fit within some automobiles and not others is of no moment.

The Federal Circuit specifically pronounced that the phrase "so dimensioned" is as accurate as the subject matter permits, automobiles being of various sizes. (See, *Rosemont, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540, 1547, 221 USPQ 1, 7 (Fed.Cir.1984)). As long as those of ordinary skill in the art realized that the dimensions could be easily obtained, Sec. 112, 2d p requires nothing more. The patent law does not require that all possible lengths corresponding to the spaces in hundreds of different automobiles be listed in the patent, let alone that they be listed in the claims.

With this said, Applicants have amended claim 11 consistent with the teachings of Orthokinetics while also incorporating the format and certain claim terms suggested by the Examiner. That is, the claim is directed to an apparatus, but recites limitations that, although functional, properly define the structural features therein in terms size and relative arrangement (i.e., "sized to be essentially fully inserted into a jet pump" or "the inclined configuration of the guide rod facilitates entry of the guide rod into a tapered surface of an opening of the jet pump").

Given the changes to claim 11, Applicants submit that the claim recitations are entirely supported, amply described, and clear on their face. As such, the claims comply with both, the written description and definiteness requirements. Accordingly, the withdrawal of the rejections §112, ¶2 is respectfully requested.

### III. Rejections Under §102.

As indicated above, claim 11 is directed to an apparatus for executing an operation inside a vessel of a nuclear reactor and positively recites, *inter alia*, an apparatus body having an elongated tubular member sized to be essentially fully inserted into a jet pump of the nuclear reactor, the tubular member having an upper portion that defines a top end of the apparatus body and is attached to a wire for support and a weight for imparting gravitational force on the apparatus body, the weight having an upper portion that is coupled to the lower portion of the tubular member.

Claim 11 also positively recites a ***guide rod abuttedly connected to the lower portion of the weight***, the lower portion of the weight defining the bottom end of the apparatus body, ***the guide rod having an incline at a fixed, predetermined, non-zero angle relative to a vertical axis of the apparatus body*** . . . wherein, the inclined structure of the guide rod facilitates entry of the guide rod into a tapered surface of an opening of the jet pump.

Applicants submit that these features are amply supported by the disclosed embodiments of the written description. By way of example, the disclosed embodiments provide that that apparatus body **1**, suspended by wire rope **2**, is lowered to the vicinity of a side opening of a jet pump **10** provided in the interior of the reactor. Guide rod **5**, which is attached to the lower portion of apparatus body **1** and used to guide body **1** into the interior, is first inserted gradually into the inlet mixer **11** along a tapered surface of the side opening. Then, when body **1** is further suspended and lowered, body **1** is drawn due to the gravitational force of weight **6** and guide rod **5** (e.g., both comprising guide **3** in FIG. 1) which has already entered the interior of jet pump **10**, as body **1** follows guide **3**. The body **1** is substantially

inserted into the interior of jet pump 10, without varying the posture or the angle of operation apparatus 100 as a whole. (See, e.g., Specification: par. [0023]-[0024]; FIGs. 1, 2).

Moreover, the disclosed embodiments provide that guide rod 5 fixed to body 1 so that guide rod 5 inclines at an appropriate angle with respect to a vertical axis, which is a center axis of body 1. In other words, guide rod 5 has an inclined surface with its cylindrical part (rod), so that the inclined surface inclines with respect to a vertical axis. The angle of guide rod 5 may be determined in advance of the operation. A weight 6 is provided to exert gravitational force on the guide rod 5 so that the angle of the guide rod 5 does not vary greatly during the insertion of the guide rod 5 into the jet pump. Guide rod 5 is fixed to a lower portion of the weight 6. (See, e.g., Specification: par. [0021]).

In addition, the disclosed embodiments provide that bellows 8 may function to restore guide 3 to a original state, in which guide rod 5 inclines at the appropriate angle with respect to the vertical axis of body 1 so that body 1 can be inserted more smoothly into jet pump 10. (See, e.g., Specification: par. [0034]).

Applicants submit that the asserted reference clearly fails to suggest each and every element of claim 11, including the features noted above. In particular, the Levesque '407 reference discloses a probe 10 for inspecting a vertically oriented, variable inside diameter pipe. The probe 10 includes a probe head 12 having an elongated housing 13 and a plurality of guide arms 16. ***The elongated housing 13 includes a plurality of flexible joints 20 spaced along the length to allow the probe to be inserted and moved through various pipe configurations.*** The probe 10 further includes a weight 14 attached to the bottom end of the probe head 12 for maintaining the vertical orientation of the probe in the interior of the pipe. (See, Levesque '407: col. 3, 5-25; FIG. 1).

The flexible joints 20 are ***located along the probe length to allow the probe to be bent and manipulated to provide for installation and movement throughout a variety of pipe configurations (FIG. 4).*** Levesque '407 discloses the use of three joints in series, each movable

about  $\pm 5.0^\circ$ , allow the probe housing **12** to be bent sufficiently, over a total range of about  $30.0^\circ$ , to allow insertion of the probe into the jet pump diffuser. (See, Levesque '407: col. 3, 52-62; FIG. 1).

In operation, the guide arms **16** are placed in the full retracted position (FIG. 2) and the probe is then delivered through a series of handling poles **70** into the piping through the top of the jet pump inlet mixer nozzle **72** (FIG. 5). *When the distance is in the correct axial location, the guide arms 16 are extended to allow the sensor assemblies 32 to contact the inside diameter of the piping (FIG. 3).* (See, Levesque '407: col. 5, 28-42; FIGs. 2, 3, 5).

With this said, Levesque '407 clearly fails to suggest the structure and configuration of the claimed guide rod. For example, the only thing that Levesque '407 provides at the bottom end of probe **10** is weight **14**, which is used to provide center of gravity. This is in direct contrast to claim 11, which requires that the guide rod - not the weight - be disposed at the end of the apparatus body. Although weight **14** is similar in operation as the weight of the claimed invention, there is in no way that weight **14** could be remotely construed as a guide rod.

Along these lines, the claim requires that the *guide rod be connected to the lower portion of the weight*. However, Levesque '407 clearly discloses that nothing is connected to the lower portion of the weight – much less a guide rod. And, as is this were not enough, the claim further requires that the *guide rod have an incline at a fixed, predetermined, non-zero angle* relative to a vertical axis of the apparatus body. While Levesque '407 depicts that weight **14** is coupled to flexible joint **20**, so that it may be “inferred” that weight **14** is capable of being positioned to have an incline angle relative to the vertical axis of probe **10**, such incline angle can only be temporary – not fixed. This is because Levesque '407 specifically teaches that weight **14** is configured to provide the center of gravity for probe **10** so that probe **10** maintains precise central and axial positioning with the pipe. (See, Levesque '407 : col. 5, lines 17-23). Clearly, having weight **14** at a fixed non-zero incline angle frustrates the purpose and principle of operation of having weight **14** providing precise center of gravity for probe **10**.

The Examiner also alleged that the flexible joints **20** and/or guide arms **16** of Levesque '407 correspond to the claimed guide rod. Applicants respectfully disagree.

That is, as noted above, flexible joints **20** allow one portion of probe **10** to variably swing relative to another portion of probe **10**. However, unlike the claimed structure of the guide rod, Levesque's '407 flexible joints **20** are not *abuttably coupled to the lower portion of the weight, which defines the bottom end of the apparatus body*. Nor do they function to *guide entry into tapered surface of jet pump opening* or have an *incline at a fixed, predetermined, non-zero angle relative to a vertical axis of the apparatus body*, as required by claim 11.

Similarly, as discussed above, the guide arms **16** of Levesque '407 merely open up and extend so that sensors **32** can touch the inside of the pipe. Again, guide arms **16** are not *abuttably coupled to the lower portion of the weight, which defines the bottom end of the apparatus body* nor is there anything in Levesque '407 that remotely suggests that the guide arms **16** operate to *guide entry into tapered surface of jet pump opening* or have an *incline at a fixed, predetermined, non-zero angle relative to a vertical axis of the apparatus body*, as required by claim 11.

Thus, Levesque '407 clearly fails to suggest a *guide rod abuttably connected to the lower portion of the weight*, the lower portion of the weight defining the bottom end of the apparatus body, as required by claim 11. In addition, Levesque '407 also clearly fails to suggest that *the guide rod having an incline at a fixed, predetermined, non-zero angle relative to a vertical axis of the apparatus body*, as also required by claim 11.

Thus, for at least these reasons, Applicants submit that Levesque '407 is incapable of suggesting each and every element of claim 11. As such, claim 11 is neither anticipated nor rendered obvious by the asserted reference. As such, claim 11 is clearly patentable and because claims 33-34 depend from claim 11, claims 33-34 are patentable at least by virtue of dependency as well as for their additional recitations. For example, as best understood, there is simply nothing in the references of record that suggest the bellows that are interposed between

the lower portion of the tubular member and the upper portion of the weight, as required by claim 33. Nor is there anything in the references of record that suggest that bellows imparts a biasing force to restore the inclination of the guide rod to the fixed, predetermined, non-zero angle relative to a vertical axis of the apparatus body.

Accordingly, for at least the aforementioned reasons, Applicants request the immediate withdrawal of the §102 rejection of claim 11 and the passage to issue of claims 11 and 33-34.



## CONCLUSION

All matters having been addressed and in view of the foregoing, Applicants respectfully request the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicants' Representative remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the Undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number **03-3975**. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully Submitted,

**PILLSBURY WINTHROP  
SHAW PITTMAN LLP**

By: 

E. Rico HERNANDEZ

Reg. No. 47641

Tel. No. 703.770.7788

Fax No. 703.770.7901

Date: February 10, 2009  
P.O. Box 10500  
McLean, VA 22102  
(703) 770-7900